RELATIONSHIP OF TEACHER CERTIFICATION METHODS TO SECONDARY AGRICULTURAL EDUCATION PROGRAM QUALITY

By

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Abstract of Dissertation Presented to the Graduate School of the University of Florida in Partial Fulfillment of the Requirements for the Degree of Doctor of Education

RELATIONSHIP OF TEACHER CERTIFICATION METHODS TO SECONDARY AGRICULTURAL EDUCATION PROGRAM QUALITY

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The purpose of this study was to investigate the relationship between method of teacher certification in agricultural education and success in conducting a secondary agricultural education program. Success in conducting a secondary agricultural education program was measured by the supervised agricultural experience program activity level and FFA chapter activity level.

This study utilized the ex post facto design. The main independent variable was method of teacher certification. Alternative independent variables were length of teaching contract and instructor's previous enrollment as a student in a secondary agricultural education program. The dependent variables were supervised agricultural experience program activity level and FFA chapter activity level.

The target population was 1,192 secondary agricultural education instructors in single teacher departments in eight southeastern states. A proportional stratified random sample of 300 was taken with a precision level of .05 and a 95%

confidence level. A mail questionnaire was developed to gather the necessary data.

Descriptive statistics were used to summarize data pertaining to individual teachers. Chi-square and phi coefficients were calculated between the three independent variables. Point-biserial correlation coefficients were calculated between the dependent variables and all independent variables. Stepwise multiple regression was used to analyze the effects of the independent variables on the dependent variables. The decision level for significance was set at .05 a priori for all statistical tests.

The point-biserial correlation coefficients between the dependent and independent variables were all significantly related, although the correlations were low, ranging from r=.16 to r=.23. The explained variance in supervised agricultural experience program activity level was significantly related to method of teacher certification and length of teaching contract. The explained variance in FFA chapter activity level was significantly related to length of teaching contract and to instructor's previous experience as a student in a secondary agricultural education program.

It was concluded that instructors certified to teach by an alternative method are less effective at conducting a supervised agricultural experience program. It was also concluded that method of certification does not affect FFA chapter activity level.

CHAPTER 1
THE PROBLEM AND ITS SETTING

Introduction

School improvement has been a major issue in America for the past several years. The Paideia Proposal (Adler, 1982) and A Nation At Risk (National Committee on Excellence in Education, 1983) are two examples of reports by study groups that have focused on the deficiencies of the public schools in America. These reports find fault with the content of the curriculum, the administration of the schools, and the methods that teachers use to teach. The authors of A Nation At Risk went so far as to say that "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war" (p. 5).

Many believe that the first step in improving education in public schools is to improve teacher education. Without a profession (teachers) possessed of high skills, capabilities, and aspirations, any reforms will be short lived (Carnegie Task Force on Teaching as a Profession, 1986). Newcomb (1977) stressed that the "improvement of instruction or the enhancement of learning begins with the teacher" (p. 4). The Holmes Group (1986) recommended that prospective

teachers receive a bachelor degree in arts and science, a master's degree in education, and complete a year internship before they are classified as a career teacher. However, at the same time that education review commissions are calling for the improvement of teachers, there is a shortage of qualified teachers, especially in the areas of science and math. Factors attributed to this shortage include the general public's low esteem for the profession, low salary, and less than ideal working conditions.

A proposed solution to this shortage and to improving the quality of teachers in general is to let prospective teachers with selected credentials into the classroom without completing a teacher education program, or by completing a modified program. B. Frank Brown (1984) in his book, Crisis in Secondary Education: Rebuilding America's High Schools, explained "state's legislatures should approve legislation permitting the schools to use adjunct teachers. This would permit qualified academic majors from the business, retired, and other sectors to teach, without making them fulfill the methodology requirements of fulltime teachers" (p. 92). E.L. Boyer (1983) likewise asserted that "outstanding professionals be recruited to teach part-time" (p. 184) and "teacher certification be modified to make possible the issuance of part-time practitioner credentials" (p. 184). Each state is responsible for establishing requisites which a prospective teacher must complete before

being issued a certificate allowing them to teach in that state's public schools. These certification requirements generally include the attainment of a bachelor's degree in education. This degree would include courses in the content area in which the teacher intends to teach, along with education courses that instruct the soon-to-be instructor how to be a teacher.

The use of alternative teacher certification methods is not new. In some areas of education there has been a history of teacher shortages. The vocational education area of agricultural education (Camp & Oliver, 1990) is an example. Two factors which have contributed to the shortage in this area are the passage of the Vocational Education Act of 1963, which expanded the scope of vocational programs, and the public's perception of teaching as an undesirable career. The shortage of qualified teachers for agricultural education has been so severe at times that programs have been closed.

One solution to help alleviate the shortage of agricultural education instructors is to offer to prospective teachers alternate methods to achieve certification. Alternative certification methods generally allow teachers to begin teaching before all of the certification requirements are met. There are several alternative certification methods. One route is to employ persons who have work experience in the content area. The knowledge and skills acquired while on the

job substitute for the college degree. The person is employed to teach with the stipulation that the required teacher education courses will be completed in a specified time, usually within two or three years after that person begins to teach. Another method is to recruit persons with a college degree in the content area and allow them to complete the required education courses during the first few years of teaching. The end result of these alternative certification methods is to allow individuals who have not completed a regular teacher education program to teach in public schools. This practice is allowed at a time when higher standards for schools, students, and teachers are being demanded by legislators and parents.

Statement of the Problem

Alternative programs for teacher preparation should assure the same competencies are acquired as those designed for traditional college students. The fundamental differences between alternative and traditional programs should be the audience and the training design, not the content, the rigor, or the expected outcomes (AACTE Position Paper on Alternative Certification, 1985). The available research on alternative certification methods, while not all inclusive, does not seem to support the above statements. The central question remains: Are the instructors who follow alternative certification methods as well prepared as instructors who complete a regular teacher education program?

The purpose of this study was to investigate the relationship between method of teacher certification in agricultural education and success in conducting a secondary agricultural education program. Program success was measured by the supervised agricultural experience program activity level and the FFA chapter activity level at the instructor's school.

Significance of the Problem

Most states have alternative teacher certification methods for vocational instructors (Erekson & Barr, 1985). A survey of all 50 state departments of education by the researcher found that 43 states had some type of certification method available to prospective agricultural education instructors other than the traditional teacher education degree. These alternatives included occupational experience, college degree in technical agriculture or other field, and emergency or temporary certification (see Table 1). Little research has been conducted to compare regularly certified vocational instructors to alternately certified instructors. As legislatures, school boards, and the general public continue to demand excellence in the public schools, states will need to determine, more than ever, whether their teacher certification process is adequately preparing teachers to conduct a complete educational program. Since the nation is facing a serious teacher shortage, there is pressure to

Table 1
Types of Certification Available to Prospective Agricultural Education Instructors By State

	Regular	Technic	Occupat	Tempora	Other		Regular	Technic	Occupat	Tempora	Other
Alabama	X					Montana	X	X			
Alaska	X					Nebraska	X			X	
Arizona	X	X	X	X		Nevada	X	X	X		
Arkansas	X	X		X		New Hampshire	X	X	X		
California	X	X	X			New Jersey	X		X	X	X
Colorado	X	X		X		New Mexico	X	X			
Connecticut	X	X				New York	X	X	X	X	
Delaware	X		X			North Carolina	X	X		X	
Florida	X	X	X	X		North Dakota	X			X	
Georgia	X	X		X		Ohio	X	X	X	X	
Hawaii	X	X				Oklahoma	X	X		X	
Idaho	X	X		X		Oregon	X				
Illinois	X			X		Pennsylvania	X	X	X	X	
Indiana	X	X	X	X		Rhode Island	X				
Iowa	X					South Carolina	X	X	X	X	
Kansas	X	X				South Dakota	X	X		X	
Kentucky	X					Tennessee	X	X			
Louisiana	X	X		X		Texas	X	X			
Maine					X	Utah	X	X		X	
Maryland	N/R					Vermont	X	X	X		X
Massachusetts	X	X	X	X		Virginia	X	X	X		X
Michigan	X	X	X	X	X	Washington	X	X			
Minnesota	X	X				West Virginia	X	X			
Mississippi	X	X	X			Wisconsin	X			X	
Missouri	X	X	X	X		Wyoming	X			X	

Regular = Regular agricultural teacher education program
Technic = Technical degree in agriculture plus teacher education certification courses
Occupat = Occupational experience in agriculture plus teacher education certification courses
Tempora = Temporary, interim, or emergency certificates
Other = College degree plus occupational exp. (Maine). College degree plus teaching exp. (Mich. and New Jersey). Peer review process (Vermont). College degree only (Virginia).

reduce this shortage by allowing teachers to enter the classroom through alternative certification processes (AACTE Position Paper on Alternative Certification, 1985).

Evertson, Hawley, and Zlotnik (1985), in their review of teacher preparation methods found that "the investigations on teacher education effects do not represent a strong body of research" (p. 3). They stated that one reason for this is the many background or context variables that might account for differences. However, they did conclude that "comparing provisionally certified and regularly certified teachers provides the best way we have of assessing the overall effects of preservice teacher education on teacher performance" (p. 3).

Identifying all the components of a quality educational program is not simple. However, two components which are almost universally accepted as integral components of a complete agricultural education program at the secondary level are the Supervised Agricultural Experience Program (SAEP) and the FFA program (Phipps & Osborne, 1988). The importance of these two components was reiterated in the final report by the National Council for Vocational and Technical Education in Agriculture (1988):

> As a goal, all students should participate in worthwhile SAEPs while enrolled in agricultural education programs. (p. 41)
>
> The FFA is dedicated to fostering leadership, self-confidence, and citizenship skills. It also strives to teach students to appreciate agriculture and about the career opportunities open to them in the agriculture and food and fiber industries. (p. 42)

These two components can be found in agricultural education programs in the secondary schools in all 50 states. The training to provide instruction and leadership in these two areas is given to the agriculture teacher in the agricultural teacher education program. Moreover, these two components are unique to agricultural education. Teachers who choose alternate certification methods may not receive adequate preparation in these areas and how these components fit into the total agriculture program. According to McCormick (1985), "These individuals, in the aggregate, do not possess a sound philosophy of a total program, nor do they usually utilize the FFA and SAEP programs as teaching tools" (p. 5).

Comparing alternately certified instructors to regularly certified instructors is a recommended method of assessing teacher preparation (Evertson, Hawley, & Zlotnick, 1985). Using the agricultural program components of supervised agricultural experience programs and FFA enabled measurement of program variables that are significant and universal. This researcher found no previous study that compared regularly certified and alternately certified agricultural education instructors on these two program components. In this study, the researcher also attempted to control for some of the context variables that may add to the differences between the two groups.

One feature of this study is that regularly certified teachers were compared to alternately certified teachers based

upon two essential elements of a quality agricultural education program. This comparison reflected on the value of the teacher training program in preparing the two groups to conduct an agricultural education program.

The results of this study may also have implications for other vocational education areas. Although this study focused on agricultural education teachers, students preparing to become instructors in other vocational areas are given the same type of training. Deficiencies found in agriculture may be found in these other vocational areas.

The implications of this study on general education can be summarized by Erekson and Barr (1985):

> Alternative credentialing has been used for several years in vocational education. It has the potential to be used in other areas of education (e.g., math and science). State legislatures and state education agency policymakers who are considering alternative credentialing in the academic subjects should carefully analyze the experiences of vocational education prior to instituting any changes in their states. (p. 18)

The methods and the results of this study may be used by other states with similar alternative certification methods as a guide for evaluating the status of their own certification methods.

Definitions and Terms

Teacher certification is a process by which a certificate is issued by the department of education of a state allowing an individual to teach in that state's public school system.

A regularly certified teacher is a teacher who attended an accredited college or university and received a bachelor's or master's degree in teacher education.

A technical degreed certified teacher is a teacher who obtained a four-year college degree in a technical area and later attended the required teacher education courses to become certified.

An industry certified teacher is a teacher who has work experience in the content area to be taught and has attended the required teacher education courses to become certified.

A temporarily certified teacher is a teacher who is teaching in a public school without a permanent certificate and who has not completed all the required teacher certification courses.

The agricultural education program is the vocational agriculture program taught in grades 9 through 12.

The supervised agricultural experience program is the practical work experience projects conducted by agricultural education students outside the classroom and supervised by the agricultural education instructor.

The National FFA Organization (FFA) is the vocational student organization of the agricultural education program.

Research Hypotheses

Vocational teachers who come into the classroom through alternative certification methods have a varied background

of educational experiences. Alternative certification methods are supposed to provide the teacher with the experiences they lack to successfully conduct a vocational program.

The purpose of this study was to investigate the relationship between method of teacher certification in agricultural education and success in conducting a secondary agricultural education program. The regular method of teacher certification was compared to the alternative types of certification methods for agricultural education instructors in secondary schools (see Figure 1). The independent variable was the method a teacher took to become certified to teach. The dependent variables were supervised agricultural experience program activity level and the FFA chapter activity level at the instructor's school.

Specifically, the following hypotheses were investigated in this study:

1. There is a positive relationship between method of teacher certification for an agricultural education instructor and supervised agricultural experience program activity level at the instructor's school.

2. There is a positive relationship between the method of teacher certification for an agricultural education instructor and FFA chapter activity level at the instructor's school.

Type of Certification	Methods
Regularly Certified	1. Completes an Agricultural Education Degree and Receives Certification ——> 2. Enters Classroom To Teach
Technical Degree Certified (Alternate)	1. Completes a Technical Agriculture Degree ——> 2. Completes Partial Teacher Certification Requirements ——> 3. Enters Classroom To Teach ——> 4. Completes Remaining Certification Requirements ——> 5. Receives Regular Certification
Industry Certified (Alternate)	1. Works in Agricultural Business or Industry ——> 2. Completes Partial Certification Requirements ——> 3. Enters Classroom To Teach 4. Completes Remaining Certification Requirements ——> 5. Receives Regular Certification
Emergency Certified (Alternate)	1. Receives an Emergency Teaching Certificate ——> 2. Enters Classroom To Teach ——> 3. Begins Completing Certification Requirements

Figure 1. Models of Teacher Certification Methods

The following alternative hypotheses were also investigated in this study to control for the variables length of teaching contract and previous enrollment in a secondary agricultural education program by the instructor:

1. There is a positive relationship between length of instructor's teaching contract and supervised agricultural experience program activity level at the instructor's school.

2. There is a positive relationship between previous enrollment by the instructor as a student in a secondary agricultural education program and supervised agricultural experience program activity level at the instructor's school.

3. There is a positive relationship between length of instructor's teaching contract and FFA chapter activity level at the instructor's school.

4. There is a positive relationship between previous enrollment by the instructor as a student in a secondary agricultural education program and FFA chapter activity level at the instructor's school.

Summary

In a recent study McGhee, Cheek, and Rancheron (1988), investigated the preparation and career patterns of agricultural teacher education graduates. They stated, "Teacher preparation and the process through which teachers become prepared to teach greatly influence the quality of educational programs conducted in the public schools" (p. 1).

Prosser and Quigley (1949) theorized that a teacher will be effective in proportion to the successful experiences the teacher has in the areas he undertakes to teach. The alternative certification methods open to agricultural education teachers in the secondary schools may not provide the necessary successful experiences required by the teacher to conduct an effective and complete agricultural education program. In light of the educational reform movement presently underway in this country, it is imperative that teacher education programs and state boards of education ensure that teachers allowed into the classroom have the necessary skills and knowledge to be effective.

CHAPTER 2
REVIEW OF RELATED LITERATURE

Introduction

This review of literature will present an overview of the material which is related to alternative certification methods for agricultural education instructors. The review is divided into four major areas. The first section focuses on alternative certification methods and how they compare to the standard certification process. Sections two and three describe the two components of the agricultural education program used as dependent variables: (a) the supervised agricultural experience program and (b) the FFA program. A final section presents a discussion of related variables that were examined in relationship to the dependent variables.

Alternative Certification Methods

Alternative certification for agricultural education has been in use for several years. The language in the Smith-Hughes Vocational Education Act of 1917 allowed for the recruitment of competent, skilled workers to be certified as agricultural education teachers without earning a teacher education degree (Erekson & Barr, 1985). This

would ensure that the teachers themselves would be competent in the skills they were teaching (Miller, 1982).

A shortage of certified instructors is another reason alternative certification of vocational instructors is so widely used (Lee et al., 1977; Logos Research, 1981; Nasman, 1979; Williams & Briers, 1978). The area of agricultural education has a perennial shortage of certified instructors (Camp & Oliver, 1990). The purpose of alternative certification is to quickly bring into the classroom prospective teachers by allowing individuals with certain academic (and/or occupational) credentials to by-pass formal teacher preparation programs (Evertson, Hawley, & Zlotnik, 1985). These individuals are usually required to fulfill one of two criteria. The first criterion is to have a college degree in the technical area for which they propose to teach. The second criterion is to have a certain number of years of occupational experience in the technical area for which they propose to teach. In both cases, the prospective teacher would be required to complete some type of teacher education program within a specified time period after they started teaching. Bell (1984) conducted a national survey and found that the average time allowed for completing this program is five years.

While alternative teacher certification has been widely accepted in vocational education, it has not had as much popularity with more traditional fields of education.

However, due to periodic teacher shortages in selected areas (mathematics and science) alternative teacher certification has been implemented in some cases. Also, in response to some national reports that teacher education programs are not attracting the best and brightest (Boyer, 1983; Goodlad, 1983; and National Commission On Excellence in Education, 1983), alternative teacher certification in the academic areas of education is again being examined (Erekson & Barr, 1985; Evertson, Hawley, & Zlotnick, 1985).

Several studies have been conducted which attempted to compare regularly certified and alternately certified instructors. The majority of these studies have been conducted with mathematics and science teachers. There have also been studies which used vocational education teachers as the prime focus.

Kapes and Pawlowski (cited in Erekson & Barr, 1985) studied the relationship between student achievement and selected characteristics of vocational instructors. They found no relationship between years of occupational experience and student achievement. However, they did find a positive relationship between the number of college credits earned by the instructor and student achievement. Rumpf (cited in Erekson & Barr, 1985) using administrators' ratings on trade and industrial teachers, concluded that college credit, not work experience, earned the teacher better overall ratings by administrators.

A study conducted by the Bureau of Occupational Education, New York State Education Department (cited in Erekson & Barr, 1985), centered on the performance of alternatively certified agricultural and trade and industrial teachers. Although no major significant differences were found, the supervisors completing the performance evaluations reported that the classroom management and human relation skills of the alternatively certified teachers needed improvement.

Evertson, Hawley, and Zlotnick (1985) reviewed twelve studies which compared certification methods among academic teachers. Four of the studies focused on student achievement, while the other studies used some type of rating system administered by principals or trained observers. The majority of the studies tended to favor the regularly certified teacher. Only in the Shim (1965) and Cornett (1984) studies did the alternatively certified instructor perform as well or better than the regularly certified instructor. Although there is not an overabundance of strong research in vocational education in this area, the existing research does tend to support that regularly certified teachers outperform alternately certified teachers.

Supervised Agricultural Experience Programs

The supervised agricultural experience program has been recognized by the agricultural education profession as an

integral part of the agricultural education program since the passage of the Smith-Hughes Act of 1917 (Harris & Newcomb, 1985). The importance of supervised agricultural experience programs has been repeatedly reinforced by the agricultural education profession. Phipps and Osborne (1988) wrote "A supervised occupational experience program is an integral and very essential part of vocational agriculture, not an appendage. Each pupil should be instructed regarding the vast importance and many advantages of this program" (p. 314). The National Advisory Committee for the Development of Standards for Quality Vocational Programs in Agriculture/Agribusiness Education (1977), in their final report, included ten standards in the supervised agricultural experience program component. The purpose of the Standards is to "serve as a model against which all existing agricultural/agribusiness programs and activities can be evaluated" (p. v).

Authors of more recent reports have continued to emphasize the importance of the supervised agricultural experience program as an integral component of the agricultural education program. In their final report, the Committee on Agricultural Education in Secondary Schools (1988) recommended that all students enrolled in agricultural education programs should participate in the supervised agricultural experience program. A study by Dunham and Long (1984) stated that "supervised occupational experience has

much to offer in making high school vocational agriculture a valid and effective program" (p. 8). Amberson and Bishop (1983) stressed that "although vocational agriculture/ agribusiness is an elective subject and participation is voluntary, for students in the program, FFA and supervised occupational experience programs are not voluntary, for they are considered essential in preparing students adequately for employment" (p. 80).

Student benefits from participation in supervised agricultural experience programs are well documented. Morton (cited in Arrington, 1981) found a positive relationship between student achievement test scores and student quality scores on their supervised agricultural experience program and on the opportunity to engage in the supervised agricultural experience program. In another study (Rawls, 1980) parents felt students received benefits in the areas of work attitude, occupational development, and human relation skills as a result of participation in supervised agricultural experience programs. In a study conducted by Berkey and Sutphin (1985) teachers and administrators agreed that the development of favorable work attitudes, values, and habits, as well as development of technical knowledge and skills, is a benefit derived by students from participation in supervised agricultural experience programs.

The teacher has a large responsibility for the success of the supervised agricultural experience program in the

local agricultural education program. McCracken (1975) stated "The success or failure of an agricultural experience program for a student depends, to a large degree, upon the effectiveness of the supervision by the teacher" (p. 182). Williams (1979) found that students perceived agricultural education teachers as providing assistance to their supervised agricultural experience programs in the areas of record keeping, providing encouragement, setting educational goals, and learning skills in agriculture. Phipps and Osborne (1988) stated "To a large degree, the responsibility for the success or failure of the supervised agricultural experience programs in a community depends on the teacher" (p. 322).

In teacher education programs at four-year colleges, the supervised agricultural experience program component is a part of the curriculum for prospective agricultural education teachers. The history, philosophy, types, methods of implementation, and supervision of programs are included in the coursework. This instruction not only develops the skills and abilities in the teacher to conduct a successful supervised agricultural experience program, but it also develops the philosophical foundation to develop a positive attitude about supervised agricultural experience programs and to believe in the necessity of conducting a supervised agricultural experience program. A study by Reneau and Roider (1986) based on a national sample of agricultural education instructors concluded that teachers with a more

positive attitude toward the supervised agricultural experience program have a higher proportion of students with supervised agricultural experience programs. Giachino and Gallington (cited in Reneau & Roider, 1986) stated the attitudes of the teacher are instrumental in how well any subject is presented and accepted by students. Tulloch (1979) summarized the importance of teacher attitude about supervised agricultural experience programs: "Each agriculture educator must be convinced that supervised agricultural experience programs are necessary for each student if we are to have outstanding vocational agriculture programs" (p. 282).

The development of the philosophical and attitudinal basis for the supervised agricultural experience program, along with the mechanics for implementing the program, is often missing or is not given the appropriate emphasis in the teacher preparation programs for alternative certification methods. Supervised agricultural experience program activity level was used as a dependent variable in this study. Based on previous research, it was hypothesized that the type of certification method chosen by an agricultural education teacher positively affects the supervised agricultural experience program activity level at the instructor's school.

FFA Organization

The National FFA Organization is the vocational student organization for students enrolled in agricultural education programs in secondary schools. The FFA was founded in 1928. In 1950, the 81st Congress of the United States, recognizing the importance of the FFA as an integral part of the agricultural education program, passed Public Law 81-740, granting a Federal Charter to the FFA (1989 Official Manual for FFA). The primary aim of the National FFA Organization is the development of agricultural leadership, cooperation, and citizenship. Newcomb, McCracken, and Warmbrod (1986) include the FFA when listing the dimensions of a complete program of agricultural education:

> FFA is an integral part of the total vocational program and contribute best to the attainment of the objectives of agricultural education and the school when the organization and its activities are planned as . . . a part of a well planned and executed instruction in agriculture. (p. 13)

The National Advisory Committee for the Development of Standards for Quality Vocational Programs in Agriculture/ Agribusiness Education Final Report (1977) included FFA in the Standards that are common to all program areas. The report listed five standards directly related to the establishment of and participation in an active FFA chapter.

The Committee on Agricultural Education in Secondary Schools (1988) reiterated the importance of the FFA to quality agricultural education and described the FFA as a

component of a total agricultural education program in their final report: "Vocational agriculture is education in agriculture. It has a long history in American education. Most programs consist of three parts: classroom and laboratory instruction, supervised agricultural experiences, and membership in the National FFA Organization" (p. 2).

The key to the success of a local FFA chapter is the agricultural education instructor who serves as the advisor to the chapter (Phipps & Osborne, 1988). Some of the recognized advisor responsibilities have been outlined in Vaughn, Vaughn, and Vaughn (1987):

1. Orient students to the fundamentals and principles of the student organization.
2. Supervise development, publication, and implementation of a yearly plan of activities.
3. Supervise election and training of local chapter officers.
4. Prepare students for participation in local, state, and national activities.
5. Assist students in advancing within available degrees of the organization.
6. Supervise development and conduct of a public relations program.
7. Supervise financial operation and fund-raising activities of the organization.
8. Assist students in developing and conducting award and recognition programs.
9. Provide instruction for students in leadership and personal development.
10. Include special needs students in the vocational student organization.
11. Supervise a yearly evaluation of the organization. (p. 11)

Newcomb, McCracken, and Warmbrod (1986) stated that the successful utilization of the FFA does not happen automatically, noting:

> The FFA can only fit into the total vocational agriculture program if the teacher sees it in this

> context and then purposely plans for the FFA to be used as such. It is the responsibility of the teacher to see that this planning and follow through occurs. (p. 249)

The Teacher Education Committee of the American Vocational Association issued a report in 1962 titled Guiding Principles for Pre-Service Training of Teachers of Vocational Agriculture (Berkey, 1983). The authors stated that the pre-service preparation of agricultural education teachers must be based on the responsibilities teachers of agricultural education are expected to assume in the school. The report further stated that this training should include special methods and techniques in program planning and conducting a complete program of vocational agriculture including FFA.

Beeman, Cheek, and Witmer (1981) identified and verified 25 competencies needed by agricultural education teachers in Florida which were related to vocational student organizations. Traditional, or regularly certified, agricultural education instructors must master all of these competencies. However, the agricultural instructor who becomes certified by an alternative method may not be required to master these essential competencies.

The level of participation in FFA sponsored contests, award programs, and other activities was used as a dependent variable in this study. It was hypothesized that the type of certification possessed by a teacher positively affects the activity level of the FFA chapter in that teacher's agricultural education department.

Other Related Variables

Length of Contract

Arrington (1981) conducted a study designed to determine the relationship between length of an agricultural education teachers contract to supervised agricultural experience program scope and FFA chapter activity level. He found significant relationships between length of teacher's contract and supervised agricultural experience program scope and FFA chapter activity level.

Gibson and Barrick (1988) investigated the relationship between supervised agricultural experience scores of student programs and selected variables. They found a significant positive relationship (r=.53) between supervised agricultural experience program scope and length of teacher's contract. In this study, length of teacher's contract was used as an independent variable and was hypothesized to be positively related to supervised agricultural experience program activity and FFA chapter activity level.

Previous Enrollment As A Student In A Secondary Agricultural Education Program

In a study by Reneau and Roider (1986) the attitudes of agricultural education instructors toward supervised agricultural experience programs were investigated. From a national sample of 305 instructors they concluded that

(a) agricultural education instructors who had a supervised agricultural experience program in high school had a higher proportion of students with supervised agricultural experience programs, and (b) agricultural education instructors who had a supervised agricultural experience program in high school had a more positive attitude toward supervised agricultural experience programs. In the study by Arrington (1981) the results indicated a significant positive relationship between a teacher's previous experience with agricultural education and FFA chapter activity level (r=.33) and supervised agricultural experience program scope (r=.27).

In this study, previous experience in an agricultural education program was used as an independent variable. It was hypothesized that previous experience in an agricultural education program is positively related to both supervised agricultural experience program activity level and FFA chapter activity level.

Size of Agricultural Education Department

In a study to investigate factors influencing agricultural education program quality, Straquadine (1988) found a significant positive relationship between the number ofinstructors in an agricultural education department and program quality. Using a national sample of agricultural education teachers and the Standards for Quality Programs in

Agriculture/Agribusiness Education, the researcher concluded the number of teachers in a department is positively related to program quality. Two components of a quality program as prescribed by the Standards are the supervised agricultural experience program and the FFA.

Harris and Newcomb (1985) examined agricultural education teacher characteristics and their relationships to supervised agricultural experience program quality. They found a small, but significant correlation between number of teachers in a department and instructors perceived importance of supervised agricultural experience programs and attitude toward supervised agricultural experience program supervision.

Only single teacher departments were included in this study. This controlled for the variable size of agricultural education departments.

CHAPTER 3
RESEARCH PROCEDURES

Introduction

This study was designed to investigate the relationship between the method of certification for agricultural education teachers and agricultural education program quality as measured by the supervised agricultural experience program activity level and the FFA chapter activity level. Two alternative variables believed to account for some of the variance in the dependent variables will be included as related independent variables. They included length of teaching contract and previous enrollment as a student in a secondary agricultural education program.

Study Design

This study was an ex post facto design. This design was selected because it was not possible to randomly assign teachers to the various methods of certification, which was the independent variable. It was also not possible to randomly assign teachers to a control or experimental group.

Three weaknesses for ex post facto research have been identified by Kerlinger (1973), "a) the inability to manipulate the independent variables, b) the lack of power to

randomize, and c) the risk of improper interpretation" (p. 371). The first two weaknesses are the result of a researcher's inability to randomly assign subjects to experimental groups. Kerlinger stated, "This lack of control is the basis of the third weakness: the risk of improper interpretation" (p. 371).

Kerlinger recommends that to control for these potential weaknesses, major and alternative or rival variables be identified before the data are collected. Significant differences or correlations are located and then interpreted. In this study, two alternative variables that could account for variance in the dependent variables were identified.

The main independent variable in this study was method of teacher certification. Alternative independent variables that were thought to account for some of the variance were length of teaching contract and previous enrollment as a student in a secondary agricultural education program.

Population and Sample

The target population for this study was the 1,192 secondary agricultural education instructors in single teacher departments in the eight southeastern states listed in Table 2. Only single teacher departments were included in this study to control for the programmatic influence one teacher may have on another teacher in a multiple teacher department. These teachers were identified from the

Table 2
Stratified Sample Sizes for States Included in Study

State	Number of Single Teacher Departments	Percent Sampled	Number of Teachers Sampled
Arkansas	199	16.7	50
Florida	120	10.1	30
Georgia	134	11.2	34
Louisiana	203	17.0	51
Mississippi	144	12.2	36
N. Carolina	172	14.4	43
S. Carolina	129	10.8	33
Virginia	91	7.6	23
Total	1192	100.0	300

Agriculture Teachers Directory (Henry, 1989). The population was stratified by state. A proportional stratified random sample was taken with a precision level of .05 and a 95% confidence level. Using the formula

$$n = \frac{N}{1 + N\,(e)^2}$$

to determine sample size (Yamane, 1967), where n = sample size, N = population size, and e = level of precision, the sample size for the study was calculated to be 300 teachers. Calculating the proportion of agriculture teachers in each state to the total sample needed, the number of teachers to be sampled in each state was determined (see Table 2).

Of the 300 teachers in the sample, 230 (76.7%) responded to the survey. Of the 230 teachers that responded, 209 provided usable completed surveys. The other 27 surveys received were unusable because two did not complete the form, two programs had closed, three teachers had left teaching and their positions were still open, three teachers were in their first year of teaching and therefore had no previous year data to report, and 17 teachers responded they were in a multiple teacher department. The number of teachers responding by state is listed in Table 3. The number of teachers responding in relation to the main independent variable, method of certification, is listed in Table 4.

Table 3
Response Rate For Teachers By State

State	Teachers Sampled	Responses N	(%)	Usable Responses N	(%)
Arkansas	50	44	(88.0)	43	(86.0)
Florida	30	27	(90.0)	25	(83.3)
Georgia	34	22	(64.7)	20	(58.8)
Louisiana	51	35	(68.6)	30	(58.8)
Mississippi	36	26	(72.2)	21	(58.3)
N. Carolina	43	38	(88.4)	37	(86.1)
S. Carolina	33	20	(60.6)	17	(51.5)
Virginia	23	18	(78.3)	16	(69.6)
Total	300	230	(76.7)	209	(69.7)

Table 4
Response Rate For Teachers By Certification Route

State	Number Sampled N	Usable Responses N (%)	Regularly Certified N (%)	Alternately Certified N (%)
Arkansas	50	43 (86.0)	38 (88.4)	5 (11.6)
Florida	30	25 (83.3)	19 (76.0)	6 (24.0)
Georgia	34	20 (58.8)	15 (75.0)	5 (25.0)
Louisiana	51	30 (58.8)	26 (86.7)	4 (13.3)
Mississippi	36	21 (58.3)	20 (95.2)	1 (4.8)
N. Carolina	43	37 (86.1)	29 (78.4)	8 (21.6)
S. Carolina	33	17 (51.5)	15 (88.2)	2 (11.8)
Virginia	23	16 (69.6)	13 (81.3)	3 (18.7)
Total	300	209 (69.7)	175 (83.7)	34 (16.3)

In an effort to determine if the nonrespondents were different from the respondents, ten nonrespondents were contacted by phone. The contacted nonrespondents were asked the questions on Part I of the survey. A comparison was made on the basis of those selected variables between the respondents and the nonrespondents (see Table 5). Respondents had taught an average of 12.6 years compared to 10.9 years for nonrespondents. An analysis of variance showed that these two means were not significantly different.

When compared by length of teaching contract, the majority of respondents and nonrespondents were employed by 12-month contracts. Nine of the nonrespondents were

Table 5
Comparison of Respondents and Nonrespondents

	Teaching Experience	Length of Contract		Certification Method		Previous Enrollment	
	Years ($\bar{X}$)	Less Than 12 Months	12 Months	Reg.	Alter.	Yes	No
Respondents (N = 209)	12.6	28%	72%	84%	16%	80%	20%
Nonrespondents (N = 10)	10.9	10%	90%	90%	10%	90%	10%

employed on a 12-month contract and one on an 11-month contract. For the respondents, 71.7% had 12-month contracts, 12.9% had 11-month contracts, 13.4 % had 10-month contracts, and 1.9% had 9-month contracts. When compared by method of certification, 83.6% of the respondents and 90% of the nonrespondents were certified by receiving a degree in agricultural education. When compared by instructor's previous enrollment as a student in a secondary agricultural education program, 80.4% of the respondents and 90% of the nonrespondents had been enrolled in an agricultural education program when they themselves were enrolled in high school.

The Fisher's Exact Test was used to test for independence between respondents and nonrespondents on the variables method of certification, teacher contract, and previous enrollment in secondary education. Fisher's Exact Test was used because of the small sample size of the nonrespondents (Agresti & Agresti, 1979). Overall, respondents and nonrespondents did not differ significantly on the three variables tested.

Instrumentation

A mail questionnaire was developed to gather the necessary data to examine the independent and dependent variables (see Appendix B). The first part of the questionnaire gathered information on the independent

variables teacher certification, length of teaching contract, and instructor's previous enrollment as a student in a secondary agricultural education program.

The second part of the questionnaire gathered data on the supervised agricultural experience program conducted by each instructor. Fourteen questions concerning supervised agricultural experience program quality were developed by the researcher based upon commonly accepted criteria and standards (National FFA Organization and Phipps and Osborne, 1988). The supervised agricultural experience program activity level survey yielded a single supervised agricultural experience program activity level score for each instructor (see Appendix C for coding of variables for data analysis).

The third part of the instrument gathered information about the FFA chapter activity level at the instructor's school. Arrington (1981) developed an instrument to measure the activity level of FFA chapters. The instrument was field tested in the Arrington study in Florida and yielded a reliability coefficient of.84. A corrected item total correlation was performed after the data were collected in the Arrington study. The items with the lowest correlation to the total score were not included in the questionnaire to be used in this study. This left 37 questions to be included on Part III of the survey instrument. The FFA chapter activity level survey yielded a single FFA chapter activity score for each chapter (see Appendix C for coding of variables for data analysis).

The validity of the content of the total instrument was established by a review of the instrument by a panel of staff members and graduate students of the Department of Agricultural and Extension Education, University of Florida. The researcher field tested the total instrument with a group of eight agricultural education instructors in Florida to check for clarity and completeness of instructions, appropriateness of questions and other factors that might affect response rates. As a result of this field test, additional instructions to the teachers were added on page one of the survey instrument.

Data Collection

To minimize the threat of nonresponse, a pre-questionnaire letter (Appendix A) was mailed to each teacher in the sample approximately two days before the questionnaire was mailed. The researcher contacted a teacher educator in each state included in the study requesting them to mail out the pre-questionnaire letter to the teachers in their state, or to provide the researcher with the letter to send to the teachers. Each teacher educator was given a list of the teachers from their state who were to be included in the study and a copy of the pre-questionnaire letter to be used in Florida. They were asked to customize the letter to their state. The researcher mailed out the pre-questionnaire letter to the teachers in Florida.

The questionnaire with a cover letter (Appendix A) was mailed to all teachers in the sample on October 20, 1989, two days after the pre-questionnaire letter was mailed. The cover letter explained the purpose of the study and the instrument. As an incentive, a piece of gum was enclosed with each questionnaire. Each teacher was assigned a coded number. This number was put on the survey instrument to allow the researcher to follow-up on those teachers who did not respond. Seven days later, a reminder memorandum was mailed to all teachers in the sample encouraging them to complete the questionnaire.

Two weeks following the initial mailing a follow-up letter with a copy of the instrument was mailed to the instructors who had not responded. Approximately ten days after the second follow-up letter was mailed, a third letter and questionnaire was mailed to the nonrespondents. A quarter was enclosed with the questionnaire with the message that it would take about the same amount of time to complete the questionnaire as it would to drink a half a can of soda, and the researcher would pay for the half of a can.

Delimitations

This study was conducted with the following constraints:

1. The variables included in the study were confined to method of teacher certification, length of

teacher's contract, and previous enrollment by the teacher as a student in a secondary agricultural education program.

2. The targeted population was the 1,192 secondary (grades 9 through 12) agricultural education teachers in single teacher departments in eight southeastern states.

3. Only teachers in single teacher departments were included in this study.

Limitations

This study was limited due to

1. The ex post facto design of the study. No causal inferences between the dependent and independent variables can be made.

2. Other variables may exist that affect the dependent variables.

Data Analysis

The data developed by this study were analyzed using the Statistical Analysis System for Personal Computers, Release 6.03. The Institute of Food and Agricultural Sciences' Computer Consulting Services were utilized to provide recommendations for the appropriate data processing techniques. The decision level for significance was set at .05 a priori for all statistical tests.

Supervised Agricultural Experience Program Activity Level

To determine the relationship between teacher certification method and supervised agricultural experience program activity level, teachers were grouped by certification method. For each teacher, a supervised agricultural experience program activity score was computed based upon the responses given to Part II of the survey instrument.

Descriptive statistics were used to summarize the data pertaining to individual teachers in the study. Chi-square and phi coefficients were calculated between the three independent variables: method of certification, length of contract, and previous experience by the teacher as a student in a secondary agricultural education program. The chi-square test was used to test for independence between the nominal variables (Agresti & Agresti, 1979). The phi coefficient was used because it measured the correlation between two nominal variables (Guilford & Fruchter, 1978). Point-biserial correlation coefficients were calculated between the dependent variable supervised agricultural experience program activity score and the main and related independent variables. The point-biserial correlation coefficient was used because one of the variables was a genuine dichotomy and the other variable was continuous (Guilford & Fruchter, 1978).

Stepwise multiple regression was used to enter each independent variable into a regression equation with supervised agricultural experience program activity level as the dependent variable. Pedhazur (1982) stated, "Multiple regression analysis is eminently suited for analyzing the collective and separate effects of two or more independent variables on a dependent variable." The F test was used to test for statistically significant relationships between supervised agricultural experience program activity score and the independent variables.

FFA Chapter Activity Level

To determine the relationship between method of teacher certification and FFA chapter activity score, teachers were grouped by certification method. An activity score was calculated for the FFA chapter in each instructor's agricultural education department based upon the responses given to Part III of the survey.

Point-biserial correlation coefficients were calculated between the dependent variable FFA chapter activity level and the three independent variables: method of certification, length of teaching contract, and previous experience by the teacher as as student in a secondary agricultural education program. Stepwise multiple regression was used to enter each independent variable into a regression equation with FFA chapter activity level as the

dependent variable. The F test was used to test for statistically significant relationships between FFA chapter activity level and the independent variables.

CHAPTER 4
ANALYSIS OF DATA

Introduction

The purpose of this study was to investigate the relationship between method of teacher certification in agricultural education and success in conducting a secondary agricultural education program. The following hypotheses were the major focus of this study:

1. There is a positive relationship between method of teacher certification for an agricultural education instructor and supervised agricultural experience program activity level at the instructor's school.

2. There is a positive relationship between the method of teacher certification for an agricultural education instructor and FFA chapter activity level at the instructor's school.

In addition, the following alternative hypotheses were also investigated in this study:

1. There is a positive relationship between length of instructor's teaching contract and supervised agricultural experience program activity level at the instructor's school.

2. There is a positive relationship between previous enrollment by the instructor as a student in a secondary agricultural education program and supervised agricultural experience program activity level at the instructor's school.

3. There is a positive relationship between length of instructor's teaching contract and FFA chapter activity level at the instructor's school.

4. There is a positive relationship between previous enrollment by the instructor as a student in a secondary agricultural education program and FFA chapter activity level at the instructor's school.

This chapter is divided into five major sections. The first section describes the characteristics of the teachers included in the study. In this section, chi-square and phi coefficients were used to compare the main independent variable, method of certification, with the alternative independent variables. Sections 2 and 3 provide comparisons of the dependent variables in the study with the independent variables. Chi-square and the point-biserial correlation coefficient were used for reporting data in these two sections. The fourth and fifth sections of this chapter are a description of the relationships between the variables in the study. Stepwise multiple regression analysis was used in the last two sections.

Characteristics of Teachers

Method of Certification

Method of certification, the main independent variable in this study, was determined by the teachers indicating which of the following types of certification they possessed: (a) bachelor's, master's, or doctoral degree in agricultural education, (b) technical agriculture degree plus completed certification courses, (c) occupational experience plus completed certification courses, (d) temporary certification, or (e) other specified type. As reported in Table 6, 175 (83.7%) teachers surveyed were certified by receiving a bachelor's or higher college degree in agricultural education. These teachers were categorized as receiving certification through a regular method. The remaining 34 (16.3%) teachers responding to the survey received their certification by some alternative method.

Table 6
Frequencies and Summary Statistics for Method of Certification of Agricultural Education Teachers

Method of Certification	Frequencies	
	N	%
Regular	175	83.7
Alternative	34	16.3
Total	209	100.0

Length of Teaching Contract

One hundred and fifty (71.8%) teachers responding to the survey were employed for 12 months (see Table 7). Twenty-eight (13.4%) teachers were employed for 10 months and 27 (12.9%) teachers were employed for 11 months. Only 4 (1.9%) teachers responded that they were employed for 9 months.

When examining the two certification methods by length of teaching contract, there appeared to be little difference between the two groups. Seventy-three percent of the regularly certified teachers were employed for 12 months, compared to 64.7% for the alternately certified teachers. Slightly more than 1% of the regularly certified teachers had a 9-month contract, while almost 6% of the alternately certified teachers were employed by a 9-month contract.

Table 7
Length of Teaching Contract by Method of Certification

Length of Teaching Contract	Method of Certification					
	Regular		Alternative		All Teachers	
	%	N	%	N	%	N
9-month	1.1	(2)	5.9	(2)	1.9	(4)
10-month	13.7	(24)	11.8	(4)	13.4	(28)
11-month	12.0	(21)	17.6	(6)	12.9	(27)
12-month	73.2	(128)	64.7	(22)	71.8	(150)
Total	100.0	(175)	100.0	(34)	100.0	(209)

Chi-square = 4.41 (p>.05)

Almost 14% of the regularly certified teachers were employed by a 10-month contract, compared to slightly less than 12% for the alternatively certified teachers. For teachers with 11-month contracts, 12% of the regularly certified teachers fit into this group, while 17.6% of the alternatively certified teachers fit into this category.

The apparent similarity between the two groups was reaffirmed statistically using the chi-square test for independence. The chi-square test for independence between the groups of regularly certified teachers and alternately certified teachers based upon length of teaching contract was not significant (chi-square = 4.41, $p>.05$).

Previous Enrollment in Secondary Agricultural Education

Teachers in the study were asked to indicate if they had been enrolled in an agricultural education program when they were students in high school. The majority (80.4%) of the respondents indicated they had been enrolled in an agricultural education program in high school (see Table 8).

When the teachers were divided by method of certification, 87.4% of the regularly certified teachers had been previously enrolled in an agricultural education program, while less than half (44.1%) of the alternatively certified teachers had been previously enrolled. The chi-square test for independence was significant between the two variables (chi-square = 33.86, $p<.05$). The phi coefficient of correlation between the two variables was

Table 8
Previous Enrollment in Secondary Agricultural Education

Previous Enrollment	Method of Certification					
	Regular		Alternative		All Teachers	
	%	N	%	N	%	N
Yes	87.4	(153)	44.1	(15)	80.4	(168)
No	12.6	(22)	55.9	(19)	19.6	(41)
Total	100.0	(175)	100.0	(34)	100.0	(209)

Chi-square = 33.86 ($p<.05$). Phi Coefficient = .403

.403, which is a moderate correlation. Teachers who had chosen the regular method of teacher certification were much more likely to have been enrolled in a secondary agricultural education program when they were in high school.

Description of Supervised Agricultural Experience Program Activity Scores for Teachers

The supervised agricultural experience program activity score was determined for each teacher from the responses given to the questions on Part II of the survey instrument. The scores are reported in Table 9. The supervised agricultural experience program scores ranged from 1.0 to 78.0. The mean supervised agricultural experience program activity score was 46.50 and the median score was 48.50. The point-biserial correlation was used to assess the relationship between the supervised agricultural experience program activity score and each of the independent variables:

Table 9
Frequencies and Summary Statistics For Supervised Agricultural Experience Program Activity Scores

SAEP Activity Score	Frequencies		
	N(teachers)	%	Cum %
1 - 36	48	24.9	24.9
37 - 49	50	25.9	50.8
50 - 58	48	24.9	75.7
59 - 78	47	24.3	100.0
Total	193	100.0	100.0

M = 46.50
Mdn = 48.50
Mo = 36.00

Min. = 1.00
Max. = 78.00
SD = 15.82

Note: Supervised agricultural experience program activity scores grouped by approximate quartiles.

method of certification, length of teaching contract, and previous enrollment in an agricultural education program.

Comparison of Method of Certification by Supervised Agricultural Experience Program Activity Score

A comparison of the method of teacher certification with supervised agricultural experience program activity scores grouped by approximate quartiles are presented in Table 10. The teachers with regular certification were spread almost evenly throughout the quartiles. The lowest concentration (21.4%) was in the fourth quartile and the highest concentration (27.7%) was in the third quartile.

The teachers with alternative certification had the highest concentration (41.2%) of scores in the fourth

Table 10
Method of Certification by Supervised Agricultural Experience Program Activity Score

SAEP Activity Score	Method of Certification			
	Regular		Alternative	
	%	N	%	N
1 - 36	21.4	(34)	41.2	(14)
37 - 49	27.7	(44)	17.6	(6)
50 - 58	25.8	(41)	20.6	(7)
59 - 78	25.1	(40)	20.6	(7)
Total	100.0	(159)	100.0	(34)

Point-Biserial r = .21 ($p<.05$)

quartile. This was double the concentration of scores in the second quartile (20.6%) and the first quartile (20.6%). This was also double the percent of the regularly certified teachers who ranked in the fourth quartile.

Teachers who had regular certification tended to be evenly distributed throughout the supervised agricultural experience activity scores quartile ranges. In contrast, the teachers with alternative certification tended to score in the lowest supervised agricultural experience activity scores quartile range by a 2 to 1 margin with each of the other quartile ranges. It appears from this data that among the regularly certified teachers, for each teacher with a high supervised agricultural experience program activity score, there is a teacher with a low supervised agricultural experience program activity score. However,

for the alternatively certified teachers, for each teacher with a high score there are two teachers with low scores. The point-biserial correlation coefficient for these two variables was low (r=.21, p <.05).

Comparison of Length of Teaching Contract by Supervised Agricultural Experience Program Activity Score

The length of teaching contract was divided into two groups: less than 12 months and 12 months. The two groups were compared with the supervised agricultural experience program activity scores which were grouped by approximate quartile ranges. These data are presented in Table 11.

For those teachers with less than a 12-month contract, 62% had supervised agricultural experience program activity scores in the bottom two quartiles. Teachers with a 12-month contract were almost evenly divided between the four

Table 11
Length of Teaching Contract by Supervised Agricultural Experience Program Activity Score

SAEP Activity Score	Length of Teaching Contract			
	12 Months		Less Than 12 Months	
	%	N	%	N
1 - 36	23.0	(32)	29.6	(16)
37 - 49	23.7	(33)	31.5	(17)
50 - 58	27.4	(38)	18.5	(10)
59 - 78	25.9	(36)	20.4	(11)
Total	100.0	(139)	100.0	(54)

Point-Biserial r = .18 (p<.05)

quartiles, although the majority (53.2 %) of the teachers scored in the top two quartile ranges.

Even though there was not a large difference between the two groups when compared by quartiles, the majority of the teachers with 12-month contracts did score in the top two quartiles while an even larger majority of the teachers with contracts less than 12-months scored in the lower two quartiles. The point-biserial correlation coefficient computed between length of teaching contract and supervised agricultural experience program activity score revealed a low correlation ($r=.18$, $p < .05$).

Comparison of Previous Enrollment as a Student in a Secondary Agricultural Education Program by the Teacher by Supervised Agricultural Experience Program Activity Score

Whether a teacher had previous experience as a student in a secondary agricultural education program was compared with supervised agricultural experience program activity scores which were grouped by quartile ranges. These data are presented in Table 12.

Seventy percent of the teachers with no previous enrollment as a student in a secondary agricultural education program had supervised agricultural experience program activity scores which placed in the lower two quartiles. Only 20.5% of the teachers had supervised agricultural experience program activity scores that placed them in the highest quartile.

Table 12
Previous Enrollment in Secondary Agricultural Education by Supervised Agricultural Experience Program Activity Score

SAEP Activity Score	Previous Enrollment			
	Yes		No	
	%	N	%	N
1 - 36	22.7	(35)	33.3	(13)
37 - 49	23.4	(36)	35.9	(14)
50 - 58	29.2	(45)	10.3	(4)
59 - 78	24.7	(38)	20.5	(8)
Total	100.0	(154)	100.0	(39)

Point-Biserial r = .22 ($p<.05$)

For teachers who had been previously enrolled as a student in a secondary agricultural education program, 54% scored in the upper two quartiles, while only 22.7% scored in the lowest quartile. Therefore, the group of teachers who had been enrolled in secondary agricultural education when they were in high school, generally had scores that were spread throughout the quartiles. The group of teachers who had not been previously enrolled had scores which placed them in the bottom two quartiles two out of three times. The calculated point-biserial correlation coefficient for these two variables was low ($r=.22$, $p<.05$).

Summary of Supervised Agricultural Experience Program Activity Scores for Teachers

Teachers with supervised agricultural experience program activity scores which placed in the bottom two

quartile ranges appeared from categorizing the data to (a) have received their certification by an alternative method, (b) be employed on less than a 12-month contract, and (c) not to have ever been enrolled as a student in a secondary agricultural education program. In contrast, teachers with supervised agricultural experience scores placed in the highest two quartile ranges appeared to (a) have received their certification by receiving a college degree in agricultural education, (b) be employed on a 12-month contract, and (c) have been enrolled in an agricultural education program in high school.

Description of FFA Activity Scores for Teachers

The data on FFA chapter activity scores for the teachers in the study are summarized in Table 13. The FFA chapter activity scores ranged from 0 to 91. The mean score was 40.76 and the median score was 39.50. The point-biserial correlation was used to compare FFA chapter activity score with each of the independent variables. The FFA chapter activity scores were grouped by approximate quartile ranges.

Comparison of Method of Certification by FFA Chapter Activity Score

A comparison of the method of teacher certification with FFA chapter activity scores are presented in Table 14. The teachers with regular certification were spread quite

Table 13
Frequencies and Summary Statistics For FFA Chapter Activity Scores

FFA Chapter Activity Score	Frequencies		
	N(teachers)	%	Cum %
0 - 27	48	25.0	25.0
28 - 39	45	23.5	48.5
40 - 50	50	26.0	74.5
51 - 91	49	25.5	100.0
Total	192	100.0	100.0

M = 40.76
Mdn = 39.50
Mo = 23.00, 28.00, 40.00
Min. = 0.00
Max. = 91.00
SD = 17.62

Note: FFA chapter activity scores grouped by approximate quartiles.

Table 14
Method of Certification by FFA Chapter Activity Score

FFA Chapter Activity Score	Method of Certification			
	Regular		Alternative	
	%	N	%	N
0 - 27	20.9	(33)	44.1	(15)
28 - 39	24.7	(39)	17.6	(6)
40 - 50	28.5	(45)	11.8	(5)
51 - 91	25.9	(41)	26.5	(8)
Total	100.0	(158)	100.0	(34)

Point-Biserial r = .16 ($p<.05$)

evenly through the top three quartiles. The fourth, or lowest quartile, had the fewest number of regularly certified teachers with 20.9%.

The teachers with alternative certification had the highest number of scores placed in the fourth quartile. Forty-four percent of the alternately certified teachers ranked in the lowest quartile. This was more than double the percent of regularly certified teachers who ranked in the lowest quartile. Although 26.5% of the alternately certified teachers did rank in the top quartile, only 11.8% were ranked in the second quartile.

The FFA chapter activity scores of teachers who had regular certification tended to be evenly distributed throughout the quartile ranges. In contrast, the teachers with alternative certification tended to be concentrated in the lowest quartile range. The point-biserial correlation coefficient between method of certification and FFA chapter activity score was low ($r=.16$, $p<.05$).

Comparison of Length of Teaching Contract by FFA Chapter Activity Score

The length of teaching contract was divided into two groups: less than 12 months and 12 months. The data presented in Table 15 compares the FFA chapter activity scores which were grouped by approximate quartile ranges with length of teaching contract.

Table 15
Length of Teaching Contract by FFA Chapter Activity Score

FFA Chapter Activity Score	Length of Teaching Contract			
	12 Months		<12 Months	
	%	N	%	N
0 - 27	21.8	(31)	34.0	(17)
28 - 39	21.8	(31)	28.0	(14)
40 - 50	26.8	(38)	24.0	(12)
51 - 91	29.6	(42)	14.0	(7)
Total	100.0	(142)	100.0	(50)

Point-Biserial r = .23 ($p<.05$)

For those teachers with less than a 12-month contract, 62% had FFA chapter activity scores in the bottom two quartiles with 34% of the teachers in the fourth quartile. Only 14% of the teachers with less than a 12-month contract were ranked in the first quartile. Over 29% of the teachers with 12-month contracts were ranked in the top quartile range and over 56% were ranked in the top two quartiles.

Teachers who were employed on a 12-month contract were more likely to have FFA chapter activity scores that placed in the top two quartiles than teachers employed on a contract that was less than 12-months. The point-biserial correlation coefficient between FFA chapter activity score and length of teaching contract was low ($r=.23$, $p<.05$). Although statistically significant, this low correlation coefficient indicates that although teachers with a 12-month

contract, overall, had higher FFA chapter activity scores, there were several 12-month contract teachers who had FFA chapter activity scores in the same range as teachers who had contracts for less than 12-months.

Comparison of Previous Enrollment As A Student In A Secondary Agricultural Education Program By The Teacher By FFA Chapter Activity Score

The teachers were asked if they had ever enrolled as a student in a secondary agricultural education program. The teachers responses were compared with the FFA chapter activity scores grouped by quartile ranges and reported in Table 16.

More than 65% of the teachers with no previous enrollment as a student in a secondary agricultural education program had FFA activity scores which were ranked in the lower two quartiles. Almost 40% had scores which

Table 16
Previous Enrollment in Secondary Agricultural Education by FFA Chapter Activity Score

FFA Chapter Activity Score	Previous Enrollment			
	Yes		No	
	%	N	%	N
0 - 27	20.8	(32)	39.5	(15)
28 - 39	22.7	(35)	26.3	(10)
40 - 50	26.6	(41)	23.7	(9)
51 - 91	29.9	(46)	10.5	(4)
Total	100.0	(154)	100.0	(38)

Point-Biserial r = .21 ($p<.05$)

placed them in the lowest quartile. Only 10.5% of these teachers had FFA activity scores which placed them in the top quartile.

For teachers who had enrolled as a student in a secondary agricultural education program, 56.5% had scores ranked in the upper two quartiles. Only 20.8% had scores ranked in the lowest quartile, while 29.9% had scores ranked in the highest quartile. Teachers who were former students of a secondary agricultural education program were fairly evenly spread throughout the quartiles, although the largest number were in the first quartile. Such a teacher was just as likely to have an active FFA chapter as an inactive chapter. Teachers who had not been previously enrolled in a secondary agricultural education program were more likely to have an less active FFA chapter. The variables previous experience as a student in a secondary agricultural education program and FFA chapter activity score had a low ($r=.21$, $p < .05$) point-biserial correlation coefficient. The low correlation coefficient reflects the fact that teachers with previous experience were evenly distributed throughout the FFA activity score quartiles.

Summary of FFA Chapter Activity Scores for Teachers

To summarize, teachers who were in the lowest two FFA activity score quartile ranges tended to (a) have received their certification by an alternative method, (b) be

employed on less than a 12-month contract, and (c) not to have been enrolled in a secondary agricultural education program.

In contrast, teachers within the highest two quartile ranges tended to (a) have received their certification to teach by receiving a college degree in agricultural education, (b) be employed on a 12-month contract, and (c) have been enrolled in a secondary agricultural education program when they were high school students.

Relationship Between The Independent Variables and Supervised Agricultural Experience Program Activity Scores

The major purpose of this study was to investigate the relationship between the method of teacher certification a teacher chose to become certified and the teacher's success in conducting a vocational program. This section examines the relationships between supervised agricultural experience program activity and the independent variables method of certification, length of teaching contract and previous enrollment as a student in a secondary agricultural education program.

Point-biserial correlation coefficients were calculated between all the independent variables and supervised agricultural experience program activity level. All were significantly related, although the correlations were low. These data are summarized in Table 17. Step-wise multiple

Table 17
Point-Biserial Correlation Coefficients for the Independent Variables and Supervised Agricultural Experience Program Activity Scores

Variable	SAEP Activity Score (n = 193)
Certification	.21
Contract	.18
Pre-Ag.	.22

p<.05

regression analysis was used to examine each independent variable in relation to supervised agricultural experience program activity with all other independent variables statistically controlled.

Stepwise Multiple Regression of Supervised Agricultural Experience Activity Level On The Independent Variables

Stepwise multiple regression was used to enter each independent variable into the regression equation as a separate step with supervised agricultural experience program activity level as the dependent variable. This analysis has been summarized in Table 18. Using stepwise multiple regression analysis allowed the researcher to partial out the effects of preceding independent variables as each variable was successfully entered into the equation.

The independent variables were listed in descending order by the amount of variance in the dependent variable that they could explain (see Table 18). The F test was used

Table 18
Step-Wise Multiple Regression of Supervised Agricultural Experience Program Activity Score on the Independent Variables (n = 187)

Independent Variables Entered Stepwise in Equation	Partial R	Partial R-square	Model R-square	F	Prob > F
Certification	.2128	.0453	.0453	8.83	0.0034
Contract	.1715	.0294	.0747	5.86	0.0163
Pre-Ag.	.1237	.0153	.0900	3.09	0.0805

Overall F = 6.06 ($p<.05$)

to test for statistically significant relationships between supervised agricultural experience program activity level and the independent variables. The F test is a measure of the significance in the change in R-squared or the explained variance in the dependent variable when each independent variable is added to the equation. Of the total explained variance in supervised agricultural experience program activity level (.0747), .0453 can be explained by method of teacher certification and an additional .0294 can be explained when length of teaching contract is added to the regression equation.

The variance in supervised agricultural experience program activity level was significantly related with method of teacher certification and length of teaching contract. Supervised agricultural experience program activity level

variance was not significantly related to the variable previous enrollment by the teacher as a student in a secondary agricultural education program when the effects of certification and length of teaching contract were controlled or partialled out.

The first research hypothesis in this study stated that there is a positive relationship between method of teacher certification and supervised agricultural experience program activity level. This hypothesis was supported at the .05 level of significance.

The first alternative hypothesis stated that there is a positive relationship between supervised agricultural experience program activity level and length of teaching contract. This hypothesis was also supported at the .05 level of significance.

The second alternate hypothesis stated that there is a positive relationship between supervised agricultural experience program activity level and previous enrollment by the instructor as a student in a secondary agricultural education program. This hypothesis was not supported when the effects of the other two independent variables were controlled.

Relationship Between The Independent Variables And FFA Chapter Activity Level

The second purpose of this study was to investigate the relationship between route of teacher certification and

FFA chapter activity level. This involved examination of the relationship between FFA chapter activity level and the independent variables method of certification, length of teaching contract and previous enrollment by the instructor as a student in a secondary agricultural education program.

First, point-biserial correlation coefficients were calculated between all the independent variables and FFA chapter activity level. All were significantly related, although the correlations were low. These data are summarized in Table 19. Second, stepwise multiple

Table 19
Point-Biserial Correlation Coefficients for the Independent Variables and FFA Chapter Activity Scores

Variable	FFA Chapter Activity Score (n = 192)
Certification	.16
Contract	.23
Pre-Ag.	.21

$p<.05$

regression analysis was used to examine each independent variable in relation to FFA chapter activity level with effects of preceding independent variables statistically controlled.

Stepwise Multiple Regression of FFA Chapter Activity Level On The Independent Variables

Stepwise multiple regression was used to enter each independent variable into the regression equation as a separate step with FFA chapter activity level as the dependent variable. This analysis has been summarized in Table 20. The independent variables were listed in

Table 20
StepWise Multiple Regression of FFA Chapter Activity Score on the Independent Variables (n = 187)

Independent Variables Entered Stepwise in Equation	Partial R	Partial R-square	Model R-square	F	Prob > F
Contract	.2415	.0583	.0583	11.52	0.0008
Pre-Ag	.1965	.0386	.0969	7.90	0.0055
Certification	.0648	.0042	.1010	.85	0.3570

Overall F = 6.89 ($p<.05$)

descending order by the amount of variance in the dependent variable that they could explain. The F test was used to test for statistically significant relationships between FFA chapter activity level and the independent variables. The F test is a measure of the significance in the change in R-squared or the explained variance in the dependent variable when each independent variable is added to the regression equation. Of the total explained variance in FFA chapter activity level (.0969), .0583 can be explained by

length of teaching contract and an additional .0386 can be explained when teacher's previous enrollment as a student in a secondary agricultural education program is added to the regression equation.

When other variables were held constant, the variance in FFA chapter activity level was significantly related to length of teaching contract and to previous enrollment by the teacher as a student in a secondary agricultural education program. FFA chapter activity level variance was not significantly related to method of certification.

The second research hypothesis of this study stated that there is a positive relationship between method of teacher certification and FFA chapter activity level. There was a positive relationship. However, when other variables were held constant, this relationship was not statistically significant at the .05 level.

The third alternate hypothesis that there is a positive relationship between FFA chapter activity level and length of teaching contract was supported at the .05 level. The fourth alternate hypothesis that FFA chapter activity level and previous enrollment by the instructor as a student in a secondary agricultural education program are related in a positive direction also was supported at the .05 level of significance.

CHAPTER 5
SUMMARY, CONCLUSIONS, RECOMMENDATIONS

The Problem

The purpose of this study was to investigate the relationship between method of teacher certification in agricultural education and success in conducting a secondary agricultural education program. The following research hypotheses directed the research in the study:

1. There is a positive relationship between method of teacher certification for an agricultural education instructor and supervised agricultural experience program activity level at the instructor's school.

2. There is a positive relationship between method of teacher certification for an agricultural education instructor and FFA chapter activity level at the instructor's school.

In addition, the following alternative hypotheses were also investigated in this study:

1. There is a positive relationship between length of instructor's teaching contract and supervised agricultural experience program activity level at the instructor's school.

2. There is a positive relationship between previous enrollment by the instructor as a student in a secondary

agricultural education program and supervised agricultural experience program activity level at the instructor's school.

3. There is a positive relationship between length of instructor's teaching contract and FFA chapter activity level at the instructor's school.

4. There is a positive relationship between previous enrollment by the instructor as a student in a secondary agricultural education program and FFA chapter activity level at the instructor's school.

Procedure

The target population for this study was the secondary agricultural education instructors in single teacher departments in eight southeastern states that had alternative teacher certification. The eight states were Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Virginia.

A three-part questionnaire was developed to gather information. Part 1 of the questionnaire was used to gather data on the independent variables teacher certification, length of teaching contract and instructor's previous enrollment as a student in a secondary agricultural education program. Part 2 of the questionnaire gathered data on the activity level of the supervised agricultural experience program conducted by each instructor. The Supervised Occupational Experience Handbook formed the basis for questions to be included in this section. The

questionnaire yielded a single supervised agricultural experience program activity score for each instructor. The third part of the questionnaire was designed to gather information on the FFA chapter activity level at the instructor's school. Thirty-seven questions from a survey instrument used in a previous study were included in this part of the questionnaire. Part 3 of the questionnaire yielded a single FFA chapter activity score for each instructor's FFA chapter.

Questionnaires were mailed to 300 teachers. Seventy-seven percent of the teachers responded. The data were analyzed using the Statistical Analysis System for Personal Computers, Release 6.03. The Institute of Food and Agricultural Sciences' Computer Consulting Services were utilized to provide recommendations for the appropriate statistical procedures. Statistical techniques used in analyzing the data included chi-square, point-biserial correlation, and stepwise multiple regression.

Summary of the Findings

Characteristics of Teachers

Of the 209 teachers included in this study, 175 (83.7%) were certified by receiving a bachelor's or higher college degree in agricultural education. The remaining 34 (16.3%) teachers received their certification by some alternative

method. The mean number of years teaching experience for the teachers in the study was 12.6.

One hundred-fifty (71.8%) of the teachers were employed on a 12-month contract. Twenty-eight (13.4%) of the teachers were employed on an 11-month contract and 27 (12.9%) were employed on a 10-month contract. Four (1.9%) teachers were employed on a 9-month contract. The majority of the teachers (80.4%) had been previously enrolled as a student in a secondary agricultural education program.

Description of Supervised Agricultural Experience Program Activity Scores for Teachers

Teachers within the lowest two supervised agricultural experience program activity score quartile ranges tended to (a) have received their certification by an alternative method, (b) be employed on less than a 12-month contract, and (c) not to have been enrolled in a secondary agricultural education program when they were in high school. In contrast, teachers within the highest two quartiles tended to (a) have received their certification by receiving a college degree in agricultural education, (b) be employed on a 12-month contract, and (c) have been enrolled in an agricultural education program in high school.

Description of FFA Chapter Activity Scores for Teachers

Teachers who were in the lowest two FFA chapter activity score quartile ranges tended to (a) have received their certification by an alternative method, (b) be employed on less than a 12-month contract, and (c) not to have been enrolled in a secondary agricultural education program when they were in high school. Conversely, teachers within the highest two quartile ranges tended to (a) have received their certification to teach by receiving a college degree in agricultural education, (b) be employed on a 12-month contract, and (c) have been enrolled in a secondary agricultural education program when they were high school students.

Relationship Between the Independent Variables and Supervised Agricultural Experience Program Activity Scores

Point-biserial correlation coefficients and stepwise multiple regression analysis were used to investigate the relationship between method of certification and supervised agricultural experience program activity level. The relationship between supervised agricultural experience program activity level and the alternate independent variables was also investigated.

Point-biserial correlation coefficients

Point-biserial correlation coefficients were calculated between all the independent variables and supervised

agricultural experience program activity level. All were significantly related, although the correlations were low: method of certification (r=.21), length of contract (r=.18), and previous experience as a student in a secondary agricultural education program (r=.22).

Stepwise multiple regression of supervised agricultural experience program activity level on the independent variables

Stepwise multiple regression was used to enter each independent variable into a regression equation as a separate step with supervised agricultural experience program activity level as the dependent variable. Of the total explained variance in supervised agricultural experience program activity level (.0747), 60.6% could be explained by method of teacher certification and 39.4% could be explained by length of teaching contract. The F test was used to test for statistically significant relationships between supervised agricultural experience program activity level and the independent variables. The variance in supervised agricultural experience program activity level was significantly related to method of teacher certification and to length ofteaching contract at the .05 level. Previous experiece by the teacher as a student in a secondary agricultural education program was not significantly related to the variance in the dependent variable when the effects of the other two independent variables were held constant. This was probably due to the

relatively large intercorrelation (phi coefficient=.403) between method of certification and previous experience. Thus, the researcher was measuring the same factors more than once in the multiple regression analysis.

Relationship Between the Independent Variables and FFA Chapter Activity Score

Point-biserial correlation coefficients and stepwise multiple regression analysis were used to investigate the relationship between method of certification and FFA chapter activity level. The relationship between FFA chapter activity score and the alternate independent variables was also investigated.

Point-biserial correlation coefficients

Point-biserial correlation coefficients were calculated between the three independent variables and FFA chapter activity level. All were significantly related at the .05 level, although the correlations were low: method of teacher certification (r=.16), length of contract (r=.23) and previous experience as a student in a secondary agricultural education program (r=.21).

Stepwise multiple regression of FFA chapter activity level on the independent variables

Stepwise multiple regression was used to enter each independent variable into a regression equation as a separate step with FFA chapter activity level as the dependent variable. Of the total explained variance in FFA chapter activity level (.0969), 60.2% could be explained by

length of teaching contract and 39.8% could be explained by teacher's previous experience as a student in a secondary agricultural education program. These two variables were significant ($p<.05$) in explaining the variance in FFA chapter activity level. The independent variable, method of teacher certification, was not significant in explaining the variance in FFA chapter activity level when the effects of the other two independent variables were held constant. This was probably due to the relatively large intercorrelation between method of teacher certification and previous experience by the teacher as a student in a secondary agricultural education program. Thus, each of the independent variables contributed to the same aspects of variability in FFA chapter activity level, and therefore measured the same factors more than once in the multiple regression equation.

Conclusions

1. The first hypothesis stated that there is a positive relationship between method of teacher certification for an agricultural education instructor and supervised agricultural experience program activity level at the instructor's school. This hypothesis was supported, although the correlation between method of teacher certification and supervised agricultural experience program activity level was low. Therefore, instructors certified to

teach by an alternative method were found to be less effective at conducting a supervised agricultural experience program.

2. The first alternate hypothesis stated that there is a positive relationship between length of teaching contract and supervised agricultural experience program activity level at the instructor's school. This hypothesis was supported when the effect of method of teacher certification was controlled, although the correlation between length of teaching contract and supervised agricultural experience program activity level was low. Therefore, it was concluded that teachers with a 12-month contract conducted a more active supervised agricultural experience program.

3. The second alternate hypothesis which stated there was a positive relationship between previous enrollment by the instructor as a student in a secondary agricultural education program and supervised agricultural experience program activity level at the instructor's school was not supported when method of teacher certification and length of teaching contract was held constant. Therefore, teachers who were not previously enrolled as a student in a secondary agricultural education program were as effective at conducting a supervised agricultural experience program as teachers who were previously enrolled.

4. The second hypothesis of this study stated that there is a positive relationship between method of teacher

certification for an agricultural education instructor and FFA chapter activity level at the instructor's school. Because this hypothesis was not supported, it was not possible to conclude that method of teacher certification affected the FFA chapter activity level, beyond the effects of the other independent variables.

5. The third alternate hypothesis which stated there was a positive relationship between length of instructor's teaching contract and FFA chapter activity level at the instructor's school was supported, although the correlation between length of instructors teaching contract and FFA chapter activity level was low. It was concluded that teachers with a 12-month contract have a more active FFA chapter.

6. The fourth alternate hypothesis stated there is a positive relationship between previous enrollment as a student in a secondary agricultural education program and FFA chapter activity level at the instructor's school. This hypothesis was supported when the effects of length of teaching contract was controlled, although the correlation between previous enrollment as a student in a secondary agricultural education program and FFA chapter activity level was low. Therefore, teachers who were previously enrolled as a student in a secondary agricultural education program conducted a more active FFA program.

Recommendations

The following recommendations are made on the basis of the findings of this study.

1. Research should be conducted to determine additional variables that explain variance in supervised agricultural experience program activity level and FFA chapter activity level.

2. Further research should be conducted which measures the type and quality of experiences the teacher had as a student in secondary agricultural education.

3. Research should be conducted that more closely examines each of the different methods of alternative teacher certification and their effects on the teacher's ability to conduct an effective supervised agricultural experience program.

4. School administrators who desire a more active supervised agricultural experience program should hire teachers with college degrees in agricultural education and employ them on 12-month contracts.

5. School administrators who desire a more active FFA chapter should employ the agricultural education instructor on a 12-month contract and select those teachers who are former secondary agricultural education students.

6. Teacher certification agencies should examine the content and quality of the supervised agricultural experience program component in their alternative certification methods.

APPENDIX A

CORRESPONDENCE

Vocational Agriculture Status Study

October 17,1990

Name
School
Address
Town, State

Dear Name:

You have been selected to participate in a study to determine what type of FFA and SAEP activities are currently being conducted and to what extent they are being practiced in vocational agriculture departments in the southeastern United States. The Agricultural & Extension Education Department at the University of Florida is sponsoring this study.

Vocational agriculture at the secondary school level is undergoing a remarkable change. The term "Agriscience" is often used to describe the new agricultural curriculum. However, in order to plan for this change, we need to gather some baseline data. The results of this study will help formulate and direct future vocational agriculture teacher education, teacher in-service, and technical up-dating activities.

You will be receiving a questionnaire in the mail in a few days. Please take a few minutes to complete the questionnaire as soon as it arrives. Your participation in this study is essential in determining future training activities for the teachers in the profession. Thank you in advance for your cooperation.

Sincerely yours,

Thomas M. McCall
Assistant In AEE

Vocational Agriculture Status Study

October 20, 1990

Name
School
Address
Town, State

Dear Name:

As you will recall from my earlier letter, the Agricultural and Extension Education Department at the University of Florida is conducting a study to determine current practices of secondary vocational agriculture teachers in regards to FFA and SAEP activities. Knowing the status of these programs will help shape and direct future teacher education and teacher inservice activities provided to vocational agriculture teachers.

Please take a few minutes to complete the enclosed questionnaire and return it immediately. For your convenience, I have provided a pre-addressed, stamped envelope. Please enjoy the enclosed piece of gum as you complete the questionnaire.

You may be assured of complete confidentiality. The number appearing on your questionnaire will only be used for follow-up purposes and to provide an abstract of the study to those who wish a copy. At no time will questionnaires or reported information be identified by name.

As a member of the special group of vocational agriculture teachers selected for this study, your response is essential to the success of this project. If you have questions about this project, please call me at 904-392-0502. For an abstract of the results, please check the box at the end of the questionnaire.

Thank you for your cooperation and crucial participation in the continual effort to improve agricultural teacher education programs in the southeast. I look forward to hearing from you soon.

Sincerely yours,

Thomas M. McCall
Assistant In AEE

Vocational Agriculture Status Study

October 31, 1989

Name
School
Address
Town, State

Dear Name:

Approximately two weeks ago I mailed you a questionnaire about the FFA and supervised agricultural experience programs conducted by you at your school. As mentioned in the cover letter, this information will be useful in determining future pre-service and in-service teacher education activities.

In order for the study to be of maximum value, it is imperative that we receive responses from all vocational agriculture teachers included in the study. My records indicate you have not yet mailed back your questionnaire. Please take a few moments now to complete the questionnaire. Your responses will be kept strictly confidential. Your participation is essential for the success of this project.

Your cooperation regarding this request is sincerely appreciated.

Sincerely yours,

Thomas M. McCall
Assistant In AEE

Vocational Agriculture Status Study

November 6, 1989

Name
School
Address
Town, State

Dear Name:

I am writing to you about the Vocational Agriculture Status Study for the Southeast Region of the United States. I have not received your completed questionnaire and because your response is so essential to the success of this study, I thought it best to send you a letter of encouragement.

Many teachers in your state have already responded, but all teachers included in this study need to participate in order for the agricultural profession to get a true picture of the status of vo-ag programs in the Southeast. And while all data collected will be reported as a composite of all the states included in the study, it is imperative that each state be equally represented in the data. This is why your individual response is critical.

I have enclosed an additional copy of the questionnaire for you along with a stamped envelope for your convenience. Please take a few minutes now to complete the questionnaire. Again, I assure you of complete confidentiality of your response.

Your cooperation regarding this request is sincerely appreciated and I look forward to receiving your response.

Sincerely,

Thomas M. McCall
Assistant In AEE

Vocational Agriculture Status Study

November 20, 1989

Name
School
Address
Town, State

Dear Name:

Yes, it's me again, writing to you about the Vo-Ag Status Study. I still haven't received your completed questionnaire. This letter is a plea for your cooperation to make this study meaningful and useful to the agricultural education profession, which you and I are a part.

I cannot stress too much how important each response is to this study. Even though all data collected will be pooled together for a composite "snapshot" of vo-ag. in the southeast, the individuals included in the study must contribute so that the picture is accurate and complete.

You can complete the questionnaire in less time than it takes to drink half a can of Coke. And I'll even pay for the half you drink while completing the questionnaire. Please do it now. I have included another copy of the questionnaire and a return envelope.

By completing the questionnaire not only will you be contributing to the advancement of your profession, you also won't have to receive any more reminder letters from me. Thank you, and I look forward to receiving your questionnaire.

Sincerely yours,

Tom McCall, Assistant
in Ag. & Ext. Educ.

APPENDIX B

THE QUESTIONNIARE

Vocational Agriculture Status Study

Part I General Information

For each of the following items, please answer by writing the answer in the space provided or by placing an X on the appropriate line.

1. How many years have you taught vocational agriculture?

_____

2. How many vocational agriculture teachers are in your department (include yourself)?

_____

IF YOU ARE A FIRST YEAR TEACHER, OR DID NOT TEACH AGRICULTURE LAST YEAR, OR ARE IN A MULTIPLE TEACHER DEPARTMENT, STOP HERE AND RETURN THE QUESTIONNAIRE.

3. How many students were enrolled in your vocational agriculture program last year (1988-89) ?

_____

4. What is the length of your teaching contract:

___ 9 months ___ 11+1 months

___10 months ___ 12 months

___10+2 months ___ Other (specify):_____

___11 months _____

5. How did you get certified to teach vocational agriculture?

___ By receiving a bachelors, masters, or doctoral degree in agricultural education.

___ By receiving a technical agriculture degree plus completing certification courses.

___ By having occupational experience plus completing certification courses.

___ Temporary certification (not fully certified).

___ Other (please specify)_____

6. Were you ever enrolled as a student in a vocational agriculture program in high school?

_____ Yes _____ No

If yes:
Were you an FFA member? _____ Yes _____ No

Did you have a Supervised Occupational Experience Project? _____ Yes _____ No

PART II Supervised Agricultural Experience Program Information

Please circle the response which corresponds to the Supervised Agricultural Experience Program (SAEP) activities conducted by you during the 1988-89 school year.

Yes No 1. All students enrolled in vocational agriculture were required to have an SAEP.

Yes No 2. Class time was used for instruction about SAEP.

Yes No 3. Students were required to keep records on their SAEPs.

Yes No 4. A portion of students' grade was determined by their SAEP.

Yes No 5. Each student's SAEP was visited at least once per year by the instructor.

Yes No 6. All student's SAEPs had signed agreements (student, instructor, parents, other involved parties).

Yes No 7. Students were visited during the summer by the instructor.

Yes No 8. Class time was used at least monthly to allow students to up-date their SAEP records.

Yes No 9. The instructor maintained records of SAEP supervision (mileage, student progress, recommendations).

Please complete the following items by "filling in" the blanks or placing an X on the appropriate line with information about your SAEP program from the 1988-89 school year.

10. Number of vocational agriculture students with SAEPs.

_____

11. Average number of days per course used for instruction about SAEP and recordkeeping.

_____

12. Number of class days per year allowed for students to up-date their SAEP records.

_____

13. Average number of visits made by you to each student's SAEP during the past twelve months.

___ 0 visits

___ greater than zero, but less than one

___ 1 to 2.0 visits

___ 2.1 to 3 visits

___ 3.1 to 4 visits

___ more than 4 visits

14. Average number of contacts with each student's parents and/or employers about their SAEP made during the last twelve months.

___ 0 contacts

___ greater than 0, but less than 1

___ 1 to 2 contacts

___ 2.1 to 3 contacts

___ 3.1 to 4 contacts

___ more than 4 contacts

PART III FFA Chapter Information

Please circle the response which corresponds to activities conducted by your FFA chapter during the 1988-89 school year.

Yes No 1. A chapter tour of supervised agricultural experience projects was conducted.

Yes No 2. The chapter conducted an agricultural demonstration project to increase community knowledge about agriculture.

Yes No 3. A community safety program was conducted.

Yes No 4. A group activity that helped conserve natural resources or improve the environment was conducted.

Yes No 5. A charitable organization in the community was assisted.

Yes No 6. Members participated in the area leadership training program.

Yes No 7. A member ran for a district office.

Yes No 8. A member ran for a state office.

Yes No 9. The chapter had a parliamentary procedure team.

Yes No 10. Chapter members attended the state FFA convention.

Yes No 11. Chapter member(s) attended the Washington, D.C. Leadership Conference.

Yes No 12. An activity encouraging savings and stimulating investment among members was conducted by the chapter.

Yes No 13. The chapter assisted members in obtaining financing for SAEP projects.

Yes No 14. The chapter maintained a file of current information concerning agricultural careers and educational opportunities.

Yes No 15. The chapter maintained a file of current information concerning scholarships and other financial help for continuing education.

Yes No 16. A chapter Building Our American Communities (BOAC) project was conducted.

Yes No 17. A parent-member banquet was held.

Yes No 18. Honorary Chapter Farmer Degrees were awarded.

Yes No 19. An activity to acquaint school faculty with the FFA was held.

Yes No 20. An activity to orient parents to the aims and purposes of the FFA was conducted.

Yes No 21. At least 6 articles on FFA activities appeared in local newspapers throughout the year.

Yes No 22. At least one radio or television program featuring chapter members was aired.

Yes No 23. A Food for America program was conducted.

Yes No 24. Chapter delegates attended sessions of the state FFA Convention.

Yes No 25. Members attended the National FFA Convention.

Yes No 26. The chapter had a member in the State FFA Convention Courtesy Corps.

Yes No 27. An activity promoting international understanding was held.

Yes No 28. Chapter members exhibited projects at the local fair.

Please complete the following items by "filling in" the blanks with information about your FFA chapter activities for the 1988-89 school year.

29. Size of FFA chapter (number of members) _____.

30. The number of chapter members exhibiting at the local fair was

_____.

31. Number of FFA non-judging contests (i.e. parliamentary procedure, public speaking) entered above the chapter level

_____.

32. Number of FFA judging teams participating above the chapter level

_____.

33. Number of proficiency award forms submitted for competition above the chapter level

_____.

34. Number of proficiency award state winners:

_____.

35. Total number of state contests in which the chapter had teams or an individual participant

_____.

36. Number of members receiving the State FFA Degree

_____.

37. Number of members receiving the American FFA Degree

_____.

☐ Yes, I would like to receive an abstract of the results of this study.

Thank you for completing this form. Please return this form using the stamped envelope to:

Thomas M. McCall
Agricultural & Extension Education Dept.
305 Rolfs Hall Univ. of Fla.
Gainesville, Florida 32611

APPENDIX C

CODING OF VARIABLES FOR DATA ANALYSIS

SAEP Activity Level Survey Scoring Key
(Instructor Survey, Part II)

Item	Coded Point Value
1.	4
2.	4
3.	4
4.	4
5.	4
6.	4
7.	4
8.	4
9.	4

Item	Coded Point Value
10.	50% or less 1 51% - 70% 2 71% - 90% 3 Over 90% 4
11.	1 for each day up to 10 max.
12.	1 for each day up to 20 max.
13. & 14.	0 = 0 0 < x < 1= 1 1 to 2 = 2 2.1 to 3 = 3 3.1 to 4 = 4 4 < x = 5

FFA Chapter Activity Survey Scoring Key
(Instructor Survey, Part III)

Item	Coded Point Value
1.	2
2.	2
3.	2
4.	2
5.	2
6.	3
7.	1
8.	2
9.	2
10.	1
11.	2
12.	1
13.	2
14.	2
15.	2
16.	2
17.	2
18.	1
19.	2
20.	2
21.	2
22.	2
23.	1
24.	2
25.	2
26.	1
27.	2
28.	1

Item	Coded Point Value
29.	50% or less 1 51% - 70% 2 71% - 90% 3 over 90% 4
30.	5 or less 1 6 - 10 2 over 10 3
31.	1 for each up to a maximum of 5
32.	1 for each up to a maximum of 10
33.	1 for each up to a maximum of 10
34.	2 for each
35.	1 for each
36.	2 for each
37.	2 for each

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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